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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

CLARK, GREGORY D

ART UNIT

PAPER NUMBER

1794

MAIL DATE

DELIVERY MODE

09/30/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/566,850	Applicant(s) ASBURY ET AL.	
	Examiner GREGORY CLARK	Art Unit 1794	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 June 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3,6,7,9-14,18,19,22 and 23 is/are pending in the application.
- 4a) Of the above claim(s) 4, 5, 8, 15-17 and 20-21 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3,6-7,9-14,18,19,22 and 23 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

The examiner acknowledges receiving the applicant arguments/remarks dated 06/25/2009. The examiner notes that claims 1-3, 6-7, 9-14,18-19 and 22-23 pending 4-5, 8, 15 and 20-21 cancelled, 16-17 withdrawn.

Rejections and objections made, in the previous office action, that do not appear below have been overcome by applicant's amendments and therefore the arguments pertaining to these rejections/objections will not be addressed.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. **Claims 1-3 and 6-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Segawa (4,068,034).**
2. **Regarding Claims 1 and 6**, the applicant claims a interior vehicle roof panel having a non-flat contour that includes:
 - first polymer material having heat absorbing properties

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- second polymer (bonded to the first polymer) having heat reflecting properties
said metalized second polymer is heat formable

The applicants' metalized layer is formed to define a non-flat topography.

Segawa discloses an insulation material used in the roofing material of a vehicle to prevent the temperature of the vehicle interior from being elevated by heat from the sun (column 5, lines 6-10).

Segawa discloses a composite film (insulation material) composed of

- first material, polypropylene layer is the heat absorbing layer (heat absorbing properties) (column 2, line 65)
- second material, metalized polyvinylidene fluoride (a heat reflecting layer) (column 4, lines 49-51).

Segawa fails to mention that the insulation material is applied to an interior vehicle roof panel having a non-flat contour

The examiner takes the position that the metalized polyvinylidene fluoride is heat formable and can be readily thermoformed to define a non-flat topography.

The examiner takes the position that the application of the insulation material of Segawa in a vehicle interior a headliner (per claim 6).

With a reasonable expectation of success, it would have been obvious to a person of ordinary skill in the art of the time of the invention to have applied the heat insulation material of Segawa to the a non-flat contour vehicle panel interior as claimed by the applicant since Segawa discloses that the insulation material is designed to

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prevent the temperature of the vehicle interior from being elevated by heat. This would allow for maximum head room and space in the vehicle.

3. **Regarding Claim 7**, Segawa also discloses that the composite film can be used in a vehicle (panel) (Column 3, lines 17-20). Segawa further discloses that the composite system is used for surfaces that are exposed to radiant heat (column 3, line 21).

The examiner takes the position that based on the teaching of Segawa such a composite system would be placed in contact with the surfaces that are exposed to radiant heat that would be inclusive of a non-flat surface with no air gap therebetween.

4. **Regarding Claims 2**, Segawa discloses an insulation material composed of a first and a second material discussed in claim 1.

The examiner takes the position that the (second material) metalized polyvinylidene fluoride (a thermoplastic) can be heat bonded to the polypropylene layer (first material).

5. **Regarding Claims 3**, Segawa discloses an insulation material containing metalized polyethylene terephthalate (column 3, lines 57-58) (second material).

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6. **Claims 18-19 and 22-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Segawa (4,068,034) and in view of Ogawa (2004/0124668).**

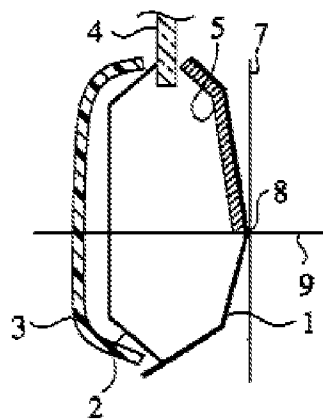
7. **Regarding Claims 18-19 and 22-23**, Segawa teaches a vehicle panel (Column 3, lines 17-20) comprising a core layer (polypropylene, Column 2, lines 62-63, 65) (first material, heat reflecting), metalized polyethylene terephthalate (column 3, lines 57-58) (second material), and formable metalized film (Column 3, line 55) bonded to said core layer.

In using the term formable, the examiner takes the position that the metalized films taught by Segawa are fully capable of conforming to the contour of the surface to which the film is applied. Segawa also teaches that the heat-insulation can be used in the roofing material for an air-conditioned vehicle and acts to prevent the temperature of the vehicle's interior from being elevated by the heat from the (column 5, lines 6-11).

Segawa further discloses that such metalized material (heat insulation material) can be applied with an adhesive or bonding agent directly to the exposed surface of the article (Column 3, line 24-28). The process taught by Segawa indicates that the directly bonding of the insulation material to the metal surface is without any air gap. Segawa discloses that such materials can be used in roofing materials of vehicle which are known to be non-planar. Segawa achieves direct attachment just as the applicant does though by a different process. Segawa does not mention the terms headliner or thermoforming.

Ogawa teaches applying heat insulation materials, such as polypropylene film (paragraph 58), to the inside portion of an outer vehicle panel that is mainly exposed to solar radiation (paragraph 36). Figure 3A shows that the insulating material is bonded directly to the inside portion of the non-flat outer vehicle panel.

FIG.3A



The film matches the contour of the adjacent vehicle surface. Ogawa further discloses that the outer panel is a vehicle body structural member and the back surface of the outer panel is the opposite surface to the surface constituting the exterior of the vehicle (paragraph 45). The figure presented by Ogawa shows a heat insulating film bonded directly to the inside surface of the outer most layer of the vehicle along a non-flat surface with no apparent air gap. Ogawa further discloses such heat insulating materials can be applied in a host of areas of the vehicles which include: a door trim, a door inner panel, a head lining, a pillar garnish, a door damp proof sheet, and the like (paragraph 46). Ogawa teaches that such materials can be used in a headliner as claimed by the applicant.

Segawa uses the same materials as the applicant and discloses that such materials are applicable to prevent the temperature of the vehicle's interior from being elevated by radiant heat (column 5, lines 6-11). Ogawa shows that insulative materials are used on non-flat interior surfaces of vehicles including headliners (paragraph 46).

With the teachings of Segawa and Ogawa a person of ordinary skill in the art at the time of the invention could make a similar headliner with no air gap by applying a different process such as using an adhesive or bonding agent to directly attach the film to the surface. The thermoforming step is viewed as process limitation and is not related to ultimate patentability to the making of the product article.

Segawa and Ogawa fails to mention that such materials can be applied by a thermoforming process.

The thermoforming step is viewed as a process elimination and not a patentable aspect of the invention.

If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process.” (In re Thorpe, 227 USPQ 964,966). Once the examiner provides a rationale tending to show that the claimed product appears to be the same or similar to that of the prior art, although produced by a different process, the burden shifts to the applicant to come forward with evident establishing an unobvious difference between the claimed product and the prior art product (in re Marosi, 710 F.2nd, 802, 218 USPQ 289, 292 (Fed. Cir. 1983, MPEP 2113).

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8. **Regarding Claims 22 and 23**, Segawa discloses that the heat insulation composite material or laminate which is adhered to a metal layer can optionally have an additional layer of a priming material adhered to the other surface of the metal (column 2, lines 1-6). Segawa further discloses that the term "priming material" as used herein means a heat-insulation material or reinforcing material such as paper or fabric (column 2, line 61).

9. **Claims 9-14 and 18-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Segawa (4,068,034) in view of Ogawa (2004/0124668) and Holtrop (4,851,283).**

10. **Regarding Claims 9-14 and 18-19**, Segawa teaches a vehicle panel (Column 3, lines 17-20) comprising a core layer (polypropylene, Column 2, lines 62-63, 65) (first material, insulating material), metalized polyethylene terephthalate (column 3, lines 57-58) (second material).

Segawa also teaches that the heat-insulation can be used in the roofing material for an air-conditioned vehicle and acts to prevent the temperature of the vehicle's interior from being elevated by the heat from the (column 5, lines 6-11).

The examiner takes the position the metalized plastic films taught by Segawa would naturally conform to the contour of the surface to which the film is applied since at elevated temperature plastic materials are known to match the shape/ contour of

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surface which it is applied. This would be inclusive of non-flat surfaces in passenger compartment interior surfaces including the headliner as claimed by the applicant.

Segawa further discloses that such metalized material (heat insulation material) can be applied with an adhesive or bonding agent directly to the exposed surface of the article (Column 3, line 24-28). The process taught by Segawa indicates that the directly bonding of the insulation material to the metal surface is without any air gap. Segawa discloses that such materials can be used in roofing materials of vehicle which are known to be non-planar. Segawa achieve direct attachment just as the applicant does though by a different process. Segawa does not mention terms headliner or thermoforming.

Ogawa teaches applying heat insulation materials, such as polypropylene film (paragraph 58), to the inside portion of an outer vehicle panel that is mainly exposed to solar radiation (paragraph 36). Figure 3A shows that the insulating material is bonded directly to the inside portion of the non-flat outer vehicle panel. The film matches the contour of the adjacent vehicle surface. Ogawa further discloses that the outer panel is a vehicle body structural member and the back surface of the outer panel is the opposite surface to the surface constituting the exterior of the vehicle (paragraph 45). The figure presented Ogawa by shows a heat insulating film bonded directly to the inside surface of the outer most layer of the vehicle along a non-flat surface with no apparent air gap. Ogawa further discloses such heat insulating materials can be applied in a host of area of the vehicles which include: a door trim, a door inner panel, a head lining, a pillar garnish, a door damp proof sheet, and the like. Ogawa teaches that such

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materials can be used in a headliner as claimed by the applicant. Ogawa fails to mention that such materials can be applied by a thermoforming process.

Holtrop discloses that materials such as polypropylene and polyethylenene terephthalate (column 2, lines 45-53) can be used to form headliners (column 2, lines 31-32) by a thermoforming process (column 3, lines 19-20).

Segawa discloses the direct bonding of the insulation material to the metal surface (including roofs) without any air gap. Ogawa discloses that such materials can be used in a headliner as claimed by the applicant (paragraph 46). Holtrop discloses that thermoplastic material such as polypropylene and polyethylenene terephthalate are used to make headliners by a thermoforming process.

A person of ordinary skill in the art at the time of the invention with the teachings of Segawa, Ogawa, and Holtrop could have readily metalized known thermoplastic materials such as polypropylene and metalized polyethylenene terephthalate to make insulation materials suitable for the thermoforming process to form headliners.

Response to Amendment

The applicant argues that Ogawa, Segawa and Holtrop do not meet the limitations of claims 1, 9 and 18.

Segawa discloses that the same heat absorbing first material (polypropylene) and the same heat reflecting second material (metalized polyethylene terephthalate) is used to prevent heat buildup in a vehicle interior as the applicant.

While Segawa does not disclose that the metalized polymer is heat formable and define a non-flat topography, the examiner maintains that it is common in the art to subject metalized thermoplastic materials to a thermoforming process whereby such materials can conform to the shape of a given non-flat or flat surface

Ogawa clearly shows the application of insulative materials to the interior portion of a non-flat surface and specifically mentions headliners. The multilayer insulative materials Segawa were readily available at the time of the invention and would have been an obvious option since both Segawa and Ogawa are directed at heat insulating of vehicles.

Holtrop discloses that plastic materials in general are subjected to the thermoforming process and in the molten state are known to conform to the shape of the a given surface.

The examiner takes the position that the direct application of a material to a surface as disclosed by Holtrop is achieved without an airgap.

Conclusion

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to GREGORY CLARK whose telephone number is (571)270-7087. The examiner can normally be reached on M-Th 7:00 AM to 5 PM Alternating Fri 7:30 AM to 4 PM and Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Larry Tarazano can be reached on (571) 272-1515. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/D. Lawrence Tarazano/
Supervisory Patent Examiner, Art Unit 1794

GREGORY CLARK/GDC/
Examiner
Art Unit 1794